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# **The Regulation of the Auxiliary *Do*: *Do*-less Negative Declarative Sentences in American English from 1800 to the Present Day<sup>1</sup>**

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## **1. Introduction**

The auxiliary *do* is obligatorily used in negative declarative sentences in Present-day English (Quirk et al. 1985: 133). However, the establishment of this *do*-insertion rule is relatively new. The use of the auxiliary *do* was optional in Early Modern English (1500-1700) and its use rapidly developed during that period. Whereas some scholars suggest that the use of *do* in negative declarative sentences became the norm by the end of the 17th century (Engblom 1938 and Ellegård 1953, inter alia), recent studies have shown that the use of *do* was still not fully regulated after 1700. *Do*-less negative constructions have been attested in 18th and 19th century documents (Tieken 1987, Nakamura 1994, Iyeiri 2004, and Nakayama 2007). However, a diachronic study of *do* after the 19th century and well into the 20th century remains lacking, especially in terms of American English.

The aim of the present study is to describe the final stage of the development of the auxiliary *do*. At this late stage of the regulation process, the study of *do* in negative constructions inevitably entails

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<sup>1</sup> The development of *do* (obligatory in negative and interrogative sentences and absent from affirmative statements) is termed “regulation” (Ellegård 1953). According to Hope (1994: 11), the present usage of *do* is regulated, as “constructions conforming to present-day usage are termed ‘regulated’, while those which would be unacceptable in Present-day Standard English are termed ‘unregulated’”.

the study of *do*-less negatives. Hence, this paper examines *do*-less negative declarative sentences in American English from the beginning of the 19th century to the present. To my knowledge, no study has been published that traces *do*-less negatives diachronically through the 19th and 20th centuries. In the course of this paper, I will answer three research questions, as discussed below.

The primary question concerns how long *do*-less negatives remained in American English, and when they became obsolete, if at all. Most studies concerning *do* after the 18th century have been, more or less, synchronic. Although some studies demonstrated that *do*-less negatives were still in use after the 18th century, they stopped exploring the use of *do*-less negatives in the 19th century. Secondly, I will examine the significance of the correlation between *do*-less negatives and verb type. Numerous scholars have mentioned the importance of verb type when discussing the development of *do* in negative declarative sentences (Engblom 1938, Ellegård 1953, and Visser 1969, *inter alia*). I will examine whether this correlation remained even in the final stage of development. Lastly, I will consider locally negated sentences with the sequence “verb + *not*”, which are not conventionally considered to be *do*-less negatives. This construction has simply been neglected in previous studies (Tieken 1987 and Nakayama 2007), but it deserves attention. The distinction between clausal and local negation is sometimes fuzzy; thus, I will attempt to construct concrete criteria to distinguish the two.

## **2. Previous Research**

In Present-day English, the auxiliary *do* is required in a negative

declarative sentence when an operator is absent (Quirk et al. 1985: 133). However, this has not always been the case throughout the history of English. In negative constructions, the auxiliary *do* began to be employed in the 15th century and developed rapidly through the Early Modern period (Ellegård 1953: 157-163). Nowadays, negative sentences without *do* are considered to be archaic (Quirk 1985: 122). Examples of negative declarative sentences with and without *do* are shown in (1) and (2).

(1) I *didn't like* mathematics at school. (Quirk et al. 1985: 133)

(2) I *care not* who knows it. ['I do not care...']

(Quirk et al. 1985: 122)

The present study focuses on the final phase of the development, during which the use of *do* became to be considered the norm. Engblom (1938: 163-164) explained that the use of *do* became regulated as in Present-day English towards the end of the 17th century. In addition, Ellegård's (1953: 161-162) famous graph suggested that the development of *do* was almost complete by the end of the 17th century. However, as Nurmi (1999: 144-145) pointed out, the regulation rate of negative declarative sentences in his data from the sub-period 1650-1700 was, in fact, less than 50 %.

Scholars have demonstrated that the development of *do* was by no means complete by 1700 (Tieken 1987, Curry 1992, Nakamura 1994, Suematsu 2004, Iyeiri 2005, and Nakayama 2007). Tieken (1987) revealed that the development of *do* was far from complete in the 18th century. She also demonstrated that the use of *do* in the 18th

century was highly subjective, dependent on writers and styles of writing. Iyeiri (2004) showed that, in 18th century novels, the auxiliary *do* was still not employed in 30-40% of negative declarative sentences. In addition, according to Nakayama (2007), the development was not yet complete in 19th century novels, although the percentage of *do*-less negatives was low (around 10 %). To my knowledge, only Nakamura (1994) has investigated the final stage of the development of *do* from a diachronic perspective, covering material from the 17th to 19th centuries. He concluded that the use of *do* exceeded 50% somewhere around the middle of the 17th century, and surpassed 90% in the 19th century. The very last stage of development, after the regulation rate exceeded 90%, has not yet been explored. In addition, previous studies have focused on British English<sup>2</sup>.

Scholars have paid special attention to certain verbs which are particularly slow to accept *do*. Ellegård (1953: 199), inter alia, classified the following verbs, which are reluctant to accept the *do*-form, as the *know*-group: *know*, *boot*, *trow*, *care*, *doubt*, *mistake*, *fear*, *skill* and *list*. Verbs in the *know*-group do not occur with *do* as frequently as do other verbs, which may lead to distortion of the data and obscure the general passage of the development of *do*. Thus, in the study of *do*, it has become conventional to classify these verbs as a different group<sup>3</sup>. For example, in Ellegård's data (1953: 161, 199), the percentage of the *do*-form for the *know*-group in the latter part of the

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<sup>2</sup> Even today the development of *do* is not yet completed in British English and other varieties of English (cf. Smith 2001).

<sup>3</sup> Different scholars have adopted different criteria. (cf. Ellegård 1953: 199, Engblom 1938, Visser 1969: 1534, Barber 1976, Tieken 1987, Nakamura 1994, Iyeiri 2004, and Nakayama 2007).

17th century was only 25%, compared to 45.9% for other verbs.

### 3. The Corpus and the Methodology for the Present Study

In order to examine *do*-less negatives in American English, the *Corpus of Historical American English* (COHA, Davies, 2008-) was used. The COHA contains over 400,000,000 words of written American English covering a 200 year period (1810-2009)<sup>4</sup>.

The COHA is useful for studying linguistic change diachronically. As it contains large amounts of data covering two centuries, it allows the development and decline of linguistic features to be traced. In addition, due to the extent of the data, rare linguistic features can also be found. In the 19th, and particularly in the 20th, century, *do*-less constructions were by no means common. As the present study aims to locate when and how this linguistic feature declined and died out, the COHA is the ideal source of data. Most of previous research has restricted its scope to the 18th or 19th centuries. Thus, by examining this linguistic feature over an extended time span, the present study may contribute to the description of the history of the auxiliary *do*.

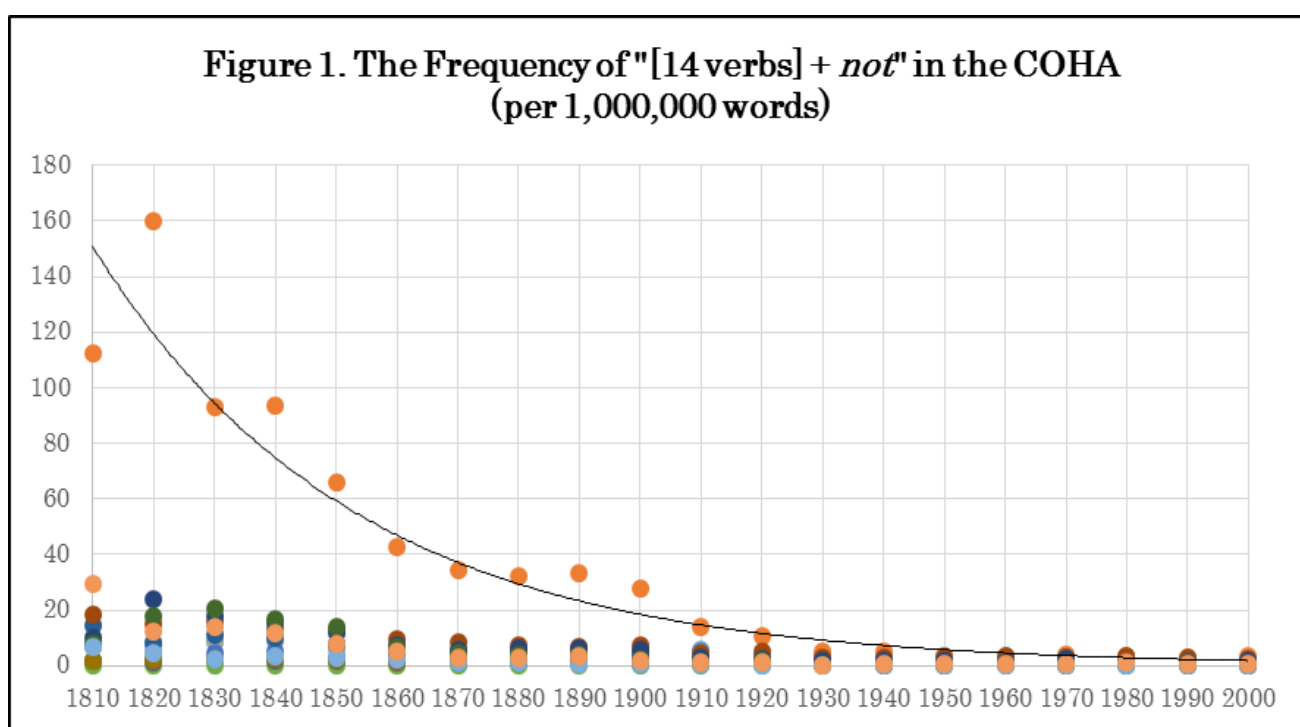
As it is not feasible to investigate all “verb + *not*” sequences in this large corpus, I examined the combination of *not* with 14 specific verbs, ten of which are the most frequent lexical verbs in the corpus (*say, know, see, make, go, get, come, think, take, and find*) and the other four from the *know*-group which are still current today (*care, doubt, mistake, and fear*)<sup>5</sup>. First, all the sequences of “verb + *not*”

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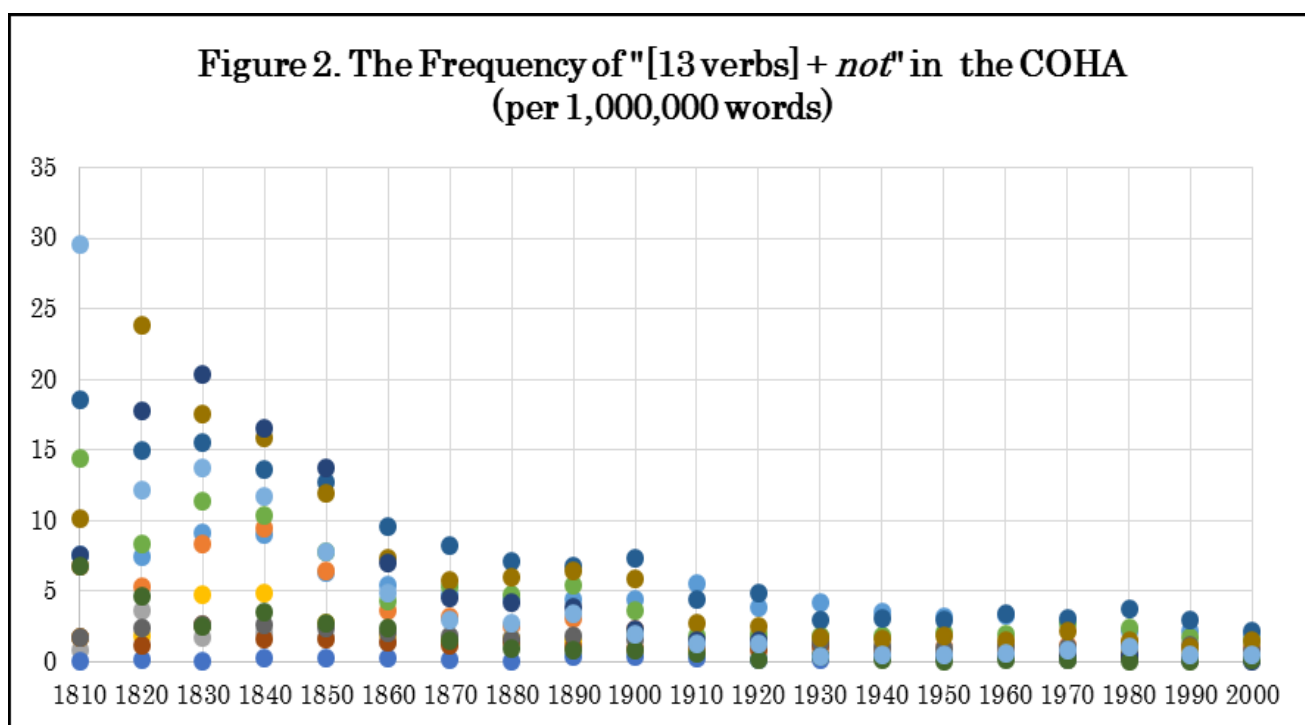
<sup>4</sup> The COHA is divided into twenty 10-year sub-periods. The number of words contained in each sub-period differs. For more details, see Davies (2012).

<sup>5</sup> In this study *have not* is not examined because *have* has not fully accepted the *do*-form especially in British English (cf. Quirk et al. 776).

with 14 verbs were extracted from the corpus<sup>6</sup>. The total number of instances retrieved was 23,296, of which *know not* and its variants accounted for nearly half of the total. The frequency of the “verb + *not*” sequence for each of the 14 verbs over the two centuries is displayed in a scatter plot in Figure 1. As the proportion of *know* is so large as to skew this plot, Figure 2 presents the data on the 13 remaining verbs, excluding *know*. The figure gives a rough idea of the decline of the *do*-less construction, although the data is too crude to draw any conclusions, and still includes inappropriate examples.



<sup>6</sup> The search query used is “[verb] not”. Each of these 14 verbs is substituted for a verb in the square brackets. Although the sequence of “verb + (pro)noun + *not*” is possible, this construction is rare and not considered in the present study.



As the amount of data is too large to scrutinize thoroughly, I will examine examples from four sub-periods: 1810-20s, 1860s, 1910s, and 2000s<sup>7</sup>. The present study examines only clausal negation “through which the whole clause is syntactically treated as negative” (Quirk et al. 1985: 775)<sup>8</sup>. All examples of local negation were excluded, but will be discussed separately in chapter 5.

As the size of the corpus is very large, it was not feasible to extract all examples of *not* and calculate the percentage of *do*(-less) constructions. The data will be presented here in terms of a normalized frequency per 1,000,000 words. As the purpose of the present study is to locate the disappearance of a linguistic feature, the relative frequency is not necessarily crucial.

<sup>7</sup> The sub-periods 1810s and 1820s were merged as the datasets from these sub-periods are too small to compare with data from other sub-periods.

<sup>8</sup> For details about types of negation, see Quirk (1985: 775-98).



## 4. Data and Analysis

### 4.1 General Trend

In the COHA, examples of negative declarative sentences with and without *do* occur. In the following examples, negative declarative sentences using the same verbs with *do* (3a-c) and without *do* (4a-c) are presented. Both constructions appear acceptable, particularly in the 19th century. Note that there are also examples which contain both constructions in the same sentence, as in (5a-b).

(3a) **I did not know** the meaning of the word for a great while;  
but... (1830, COHA)<sup>9</sup>

(3b) **I don't care** where you came from, what your history is, or  
what you are here for. (1860)

(3c) In Montgomery, if **I do not mistake**, Booth met the woman  
from whom he received a stab which he carried all the rest  
of his days. (1865)

(4a) **I knew not** the meaning of the exquisite carvings that  
lanced that wooden frame, but... (2006)

(4b) **I care not** where I die, but I should love to live in Araby.  
(1819)

(4c) The writer, if **we mistake not**, is not altogether unknown in  
Littleton. (1860)

(5a) Having eyes, **they see not**; with their ears **they do not hear**.  
(1863)

(5b) **I know not** why **I did not rebuke** her, at once, to the dust...  
(1823)

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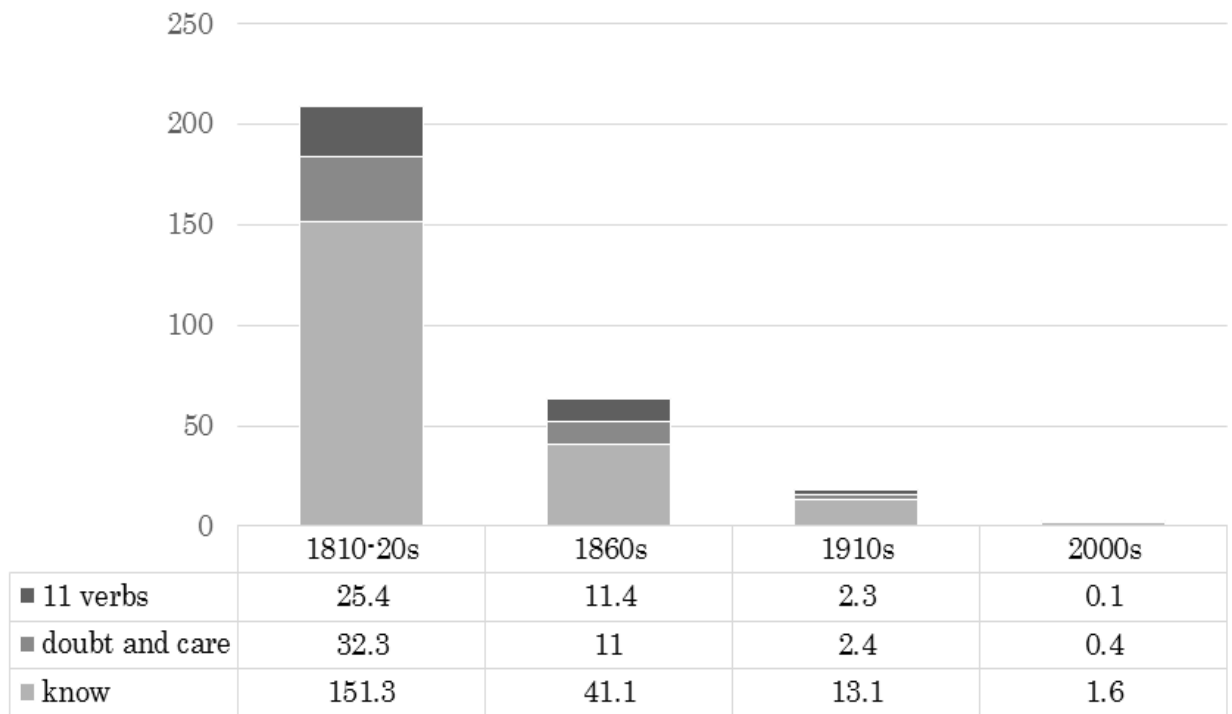
<sup>9</sup> In this paper, all the examples are from the COHA unless otherwise stated. The underlining and boldface are mine.

The normalized frequency of *do*-less declarative negatives in the four sub-periods from the two centuries are shown in Table 1 and visually presented in Figure 3.

**Table 1. *Do*-less Negative Declarative Sentences in the COHA  
(per 1,000,000 words)**

	1810-20s	1860s	1910s	2000s	Total
<i>know</i>	151.3	41.1	13.1	1.6	207.1
<i>doubt</i>	15.4	6.4	1.3	0	23.1
<i>care</i>	16.9	4.4	1.1	0.4	22.9
<i>come</i>	5.9	2.9	0.6	0	9.4
<i>see</i>	4.9	2.5	0.5	0	7.9
<i>mistake</i>	4.9	2.2	0.4	0	7.5
<i>think</i>	3.3	1.1	0.1	0	4.5
<i>fear</i>	3.5	0.8	0.2	0	4.5
<i>go</i>	0.6	0.8	0.3	0	1.7
<i>say</i>	0.6	0.5	0.1	0	1.3
<i>make</i>	1.0	0.1	0.1	0	1.1
<i>find</i>	0.4	0.5	0	0	0.9
<i>take</i>	0.2	0.3	0	0	0.6
<i>get</i>	0.1	0	0	0	0.1
Total	209.2	63.5	17.8	2.1	292.6

Figure 3. *Do-less* Negative Declarative Sentences in the COHA (per 1,000,000 words)



In Table 1, the verbs are listed in descending order in terms of their frequency of use in *do-less* negatives<sup>10</sup>. The figure represents the normalized frequency of *do-less* negatives. Each column represents the total occurrences of *do-less* constructions in negative declarative sentences in each sub-period. Columns are composed of three verb categories, namely one section for *know*, one for *doubt* and *care*, and one for the 11 remaining verbs. The verbs, *know*, *care*, and *doubt* are treated separately because they make up a large proportion of the total data and deserve special attention.

<sup>10</sup> A normalized frequency of less than 0.1 is displayed as 0, whereas the raw frequency is used to calculate the total frequency. Hence, the sum total of each value does not necessarily correspond to the total normalized frequency. In the present study, data in all tables and figures are normalized per one million words.

As previous studies have claimed, *do*-less negative sentences survived in the 19th and even the 20th century. At the same time, a steady but rapid decline of this linguistic construction can be observed over the two centuries. At the beginning of the 19th century, approximately 209 examples of *do*-less negative sentences were found per one million words, implying that it was far from rare. The frequency of *do*-less negatives declined one-third in half a century, and by a further one-third in the following half a century. The frequency decreased by more than one-tenth within a century, from the beginning of the 19th century. At the dawn of the 20th century, *do*-less negatives appeared only sporadically, with a frequency of 17.8 per one million words. Only a few examples were found in the beginning of the 21st century. Although the rate of *do*-less constructions in the 19th century is reported to be below 10% (Nakamura 1994 and Nakayama 2007), the decline of the linguistic feature remains evident.

## 4.2 Verb Types

*Do*-less constructions occur almost exclusively with certain verbs. The verbs may be classified, according to their frequencies, into three categories. The categories are divided by a broken line in Table 1 above.

The first category consists of the three most frequent verbs, namely *know*, *doubt*, and *care*, which all belong to the *know*-group of verbs. These verbs appear to be reluctant to accept the *do*-form. The frequency of *do*-less constructions with these verbs was far higher than with other high-frequency verbs, and they accounted for around

87% of all the *do*-less negative occurrences in the COHA. The verb *know* is particularly significant in this regard, accounting for nearly two-thirds of the total.

Although the contribution of *know not* appears quite significant, this does not necessarily mean that *know* was the slowest verb to accept *do*, because the frequency of *know* itself was fairly high in comparison to *doubt* and *care*, for example<sup>11</sup>. *Doubt* and *care* appeared frequently without *do*. These verbs were retained in *do*-less constructions in formulaic expressions. For example, the sequence *I care not* was employed as a set phrase throughout the 19th century. Furthermore, the sequence *mistake not* appeared only in the formula *If I (we) mistake not*, which was even used in parentheses. A further expression, *I doubt not*, also appeared in parentheses, and seems to have acquired a meaning like *no doubt* or *without doubt*. Nevertheless, these expressions did not escape the decline around the beginning of the 20th century.

The second category in Table 1 includes five verbs (*come*, *see*, *mistake*, *think*, and *fear*), of which a few examples were still found in the beginning of the 19th century. However, these verbs did not appear without *do* after the second half of the 19th century. The remaining verbs (*go*, *say*, *make*, *find*, *take*, and *get*) make up the last category. These verbs did not occur in *do*-less constructions through the 19th and 20th centuries, and evidently adopted *do* before the 19th century.

From the data in Table 1, the gradient of the decline in *do*-less

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<sup>11</sup> In fact, according to the previous studies, *doubt* is later than any other verbs to accept *do* in the 18th and 19th centuries (Iyeiri 2004 and Nakayama 2007)

constructions is noticeable. The first category persisted until the last sub-period, whereas the second existed in the 19th century but almost died out in the same century. Examples of the third category did not occur in the 19th century. After the 20th century, *do*-less negatives with verbs other than *know*, *doubt*, and *care* were extremely rare. Furthermore, in the 2000s, only *know* and *care* appeared without *do*. It is therefore attested in the COHA data that the use of *do* was restricted to fewer and fewer verbs over time. The correlation of verb types and *do*-less negative declaratives was even more significant at the final stage of the regulation process.

## 5. Local Negation

### 5.1 Previous Research and the Method

So far, I have examined examples of clausal negation only. Now let us turn our attention to local negation, which looks the same as *do*-less negatives, but “in which one constituent (not necessarily a clause element) is negated” (Quirk et al. 1985: 775). Visser (1969: §1442-1445) observed that the four *do*-less negative constructions in (6a-d) “survived in Present-day English”, although his exposition is somewhat inaccurate as all of the examples in (6) involve local negation.

- (6) (a) The construction in which *not* forms a kind of  
semantic unit with the words following it, e.g.  
‘he cares not a farthing’...
- (b) The construction in which *not* is not weak-stressed  
and does clearly not negative the verb, especially when

a contrast is expressed by means of ‘but’, as e.g.

In ‘It seemed not a public park, but a private garden’.

(c) The construction in which finite verb+*not* is followed by an infinitive, as e.g. ‘He seemed not to notice’...

(d) The construction in which finite verb+*not* is not patterned with any complement or adjunct...

[as] ‘I think not’ ... [in which] not would seem to stand for a whole clause...

(Visser 1969: §1442-1445)

Tieken (1987: 38-39) excluded the above constructions from her analysis, stating that “these constructions cannot be regarded, except seemingly in form, as *do*-less negative sentences”. Nakayama (2007) also excluded these types of local negation. In a study of *do*-less negatives, especially in the context of the development of *do*, it is reasonable and even necessary to exclude local negation from the analysis. Clausal and local negation are considered two different notions in syntax. However, the distinction between the two construction types is sometimes fuzzy and it is difficult to differentiate between them. In order to distinguish the two, it is useful to consider the structure of local negation and its historical change over time.

I have adapted and expanded Visser’s (1969) classification above into the following five types of local negation: negative emphatic (e.g. *not a word*, *not the slightest*), degree adverb (e.g. *not very often*, *not less than*), correlation (e.g. *not only ... but*), (*to*-)infinitive (e.g. *decided not to go*) and pro-form (e.g. *I think not* [*not* = *not so*]). I

discuss these 5 types of local negation below, presenting examples and the frequency of each type in the COHA.

## 5.2 Type 1: Negative Emphatic

The negative emphatic type of local negation corresponds to Visser's type (6a), in which "*not* forms a kind of semantic unit with the words following it" (1969: §1442). Negative emphatic local negation is illustrated in (7a, b). This construction was especially common as a sequence in the COHA, as in *say not a word*. However, constructions with *do* also occurred, as shown in (8a, b) and were, in fact, by no means rare.

(7a) The door opened, and for a long moment I **said not** a word.  
(2001)

(7b) ...while of the recent innovations made by writers like Bain  
and Maudsley we **get not** the slightest hint. (1868)

(8a) No, Sir, I **didn't say** a word. I was too scared. (1916)

(8b) Ladies **do not get** the slightest mercy from him," Mr. Bovyer  
remarked. (1889)

Table 2 presents the normalized frequency for type 1 locally negated construction.<sup>12</sup> As mentioned above, the occurrence of this construction was particularly common with *say*. The rate of decline for this construction was slow but noticeable. The frequency of the construction did not change in the first half of the 19th century, but

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<sup>12</sup> As is the case in Table 1 above, values less than 0.1 are reduced to 0. In addition, verbs which do not occur in this construction in the COHA are not listed in the table.



showed a gradual decline in the latter half of the same century. The change in occurrence of this construction resembles that of clausal negation, although the pace of the decline was slower. In fact, excluding *say*, the decline continued since the beginning of the 19th century. The data for *say* skew the picture of the general development because of its formulaic quality, which let an expression persist longer.

Table 2. Frequency of Local Negation Type 1

	1810-20s	1860s	1910s	2000s	Total
<i>say</i>	1.0	2.1	0.9	0.3	4.2
<i>care</i>	0.5	0.2	0.2	0.1	1.0
<i>know</i>	0.5	0.2	0.1	0.1	0.9
<i>see</i>	0.2	0.2	0.2	0.1	0.8
<i>find</i>	0.5	0.1	0	0	0.6
<i>make</i>	0.1	0.1	0	0	0.3
<i>take</i>	0	0.1	0.1	0	0.2
<i>get</i>	0	0.1	0	0.1	0.2
<i>think</i>	0.1	0	0	0	0.2
<i>come</i>	0	0.1	0	0	0.1
Total	3.0	3.1	1.7	0.7	8.4

### 5.3 Type 2: Degree Adverb

The degree adverb type of local negation is based on Visser's second group (6b) "in which *not* is not weak-stressed and does clearly not

negative the verb” (1969: §1442-1445), except examples with a correlative “*not (only) ... but*”. Constructions with a correlative are classified here as type 3, discussed in the next section.

(9a) **I cared not** very much for it. I was too much engrossed with deeper interests of the time, both public and private. (1868)

(9b) For **it takes not** less than three years to cure syphilis, and at least six months to eradicate gonorrhea. (1910)

(10a) I am losing my memory. But **I do not care** very much. There are so few things worth remembering! (1873)

(10b) **You did not accept** less than ten francs (they all broke this rule). (1922)

Table 3. Frequency of Local Negation Type 2

	1810-20s	1860s	1910s	2000s	Total
<i>think</i>	0.9	0.4	0	0	1.2
<i>make</i>	0.2	0.3	0.1	0	0.6
<i>say</i>	0	0.1	0.1	0.3	0.5
<i>care</i>	0.1	0.1	0.2	0	0.4
<i>find</i>	0	0.2	0.1	0	0.3
<i>know</i>	0	0.2	0	0	0.3
<i>take</i>	0	0.2	0	0	0.2
<i>come</i>	0	0	0	0.1	0.1
<i>see</i>	0	0.1	0	0	0.1
<i>get</i>	0	0.1	0	0	0.1
<i>fear</i>	0	0	0	0	0.1
Total	1.2	1.7	0.7	0.6	4.2

Type 2 consists mainly of a type of local negation in which “*not* modifies a degree adverb, which in turn modifies a positive gradable adjective or adverb” (Quirk et al. 1985: 791). This type of local negation is not specifically referred to by Visser (1969) but satisfies the condition given in (6b). This construction, as in (9a, b), can be also substituted with the *do*-form, as in (10a, b). As Table 3 demonstrates, this construction also declined gradually in use from the second half of the 19th century onward.

### 5.4 Type 3: Correlation

The third type of local negation consists of examples with the correlative phrase “*not (only) ... but*”. This construction is classified separately from type 2 because the particular sequence is distinctive and less likely to be confused with clausal negation, which was statistically proved in this analysis. This construction, unlike the two types above, appeared constantly throughout the two centuries and did not seem to decline over the course of time. The construction is illustrated in (11a, b). Note that, unlike types 1 and 2, this construction did not accept the *do*-form, though Quirk et al. (1985: 940) offered the example in (12a). A few examples in which *do* was employed with “*not (only) ... but*” occurred in the COHA, as in (12b), but this construction seemed uncommon. As this construction was not commonly expressed with the *do*-form, it did not show the decline of the decline of the two types above.

(11a) **They thought not** of His glory **but** of the glory of their order, and... (1911)

(11b) It was then I knew that the **Grail brought not only** peace, **but** judgment. (2001)

(12a) He did*n't* come to help, *but* to hinder us.

= He came not [to help], but [to hinder us].

(Quirk et al. 1985: 940)

(12b) By iconography **I do not mean only** graphic or plastic representations, **but** above all the temporary embodiment of the spirits in ritual participants. (1995)

Table 4. Frequency of Local Negation Type 3

	1810-20s	1860s	1910s	2000s	Total
<i>come</i>	1.0	0.6	0.6	1.0	3.2
<i>find</i>	0.5	0.3	0.3	0.3	1.4
<i>see</i>	0.1	0.2	0.2	0.3	0.9
<i>say</i>	0.2	0.1	0.2	0	0.5
<i>know</i>	0	0.1	0.3	0.1	0.5
<i>make</i>	0.1	0.2	0	0.1	0.4
<i>think</i>	0.1	0.1	0.1	0.1	0.4
<i>take</i>	0.1	0.1	0.1	0.1	0.3
<i>go</i>	0	0.1	0.2	0	0.3
<i>care</i>	0.1	0	0	0	0.1
<i>fear</i>	0.1	0	0	0	0.1
<i>doubt</i>	0	0.1	0	0	0.1
Total	2.5	1.8	2.1	2.0	8.4

### 5.5 Type 4: (To-)Infinitive

Type 4 is based on Visser's third group (6c). Huddleston & Pullum (2002: 803-804) explained that *not* in this construction negates the following verb. However, historically, this has not always been the case. Constructions in which a *to*-infinitive follows *not* require a context to distinguish between clausal and local negation. In the cases of *care* and *know*, *not* can negate either the preceding verb (hence, the whole clause) or only the following infinitive. Whereas the clauses in (13a, b) can be interpreted as clausal negation, those in (14a, b) could

be understood as local negation. The underlining in the examples indicates the scope of negation.

The examples of type 4 local negation (14a, b) cannot be paraphrased with the *do*-form. For example, considering the context in (14a), *I did not care to interrupt* does not mean the same as the original *I cared not to interrupt*. The example in (12a) above is an exception, in which the negative scope is obvious due to the syntactic device (*not ... but*). Without this device, the meaning of the sentence is ambiguous.

The frequency of this type 4 construction declined until the beginning of the 20th century but increased afterward. The instances of *say not to* and *know not to* increased considerably towards the opening of the 21st century. According to the COHA data, “V *not to* v” sequences were increasing, especially with verbs such as *decide not to*, *try not to*, *determine not to* and *promise not to*<sup>13</sup>.

(13a) “I shall remain here beside my Princess until a merciful death releases me from my anguish. **I care not to live.**”  
(1912)

(13b) But **she** is proud and haughty, and **knows not to** obey.  
(1862)

(14a) Still, she sat for several moments buried in thought which  
**I cared not to interrupt.** (1910)

(14b) If you ask for word origin and they say Latin,  
**you know not to put a “k” in there.** (2003)

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<sup>13</sup> The search query in this case is “[v\*] *not to*”.

Figure 5. Frequency of Local Negation Type 4

	1810-20s	1860s	1910s	2000s	Total
<i>care</i>	0.7	0.4	0.1	0	1.3
<i>know</i>	0	0	0	1.2	1.2
<i>say</i>	0.1	0.1	0.2	0.8	1.2
Total	0.9	0.5	0.3	2.0	3.7

### 5.6 Type5: Pro-form

In the pro-form local negation construction, *not* functions as a substitute for a *that*-clause (Quirk et al. 1985: 880-882). This type 5 is syntactically different from the other local negation types as it always carries the *that*-clause with it. In Present-day English, the construction is restricted to certain verbs, such as *hope* and *suppose* (Quirk et al. 1985: 881). Biber et al. (1999: 752-753) observed that “[o]nly two verbs are moderately common co-occurring with [pro-form] *not* – *hope* and *guess* (the latter in AmE)”.

(15a) Jon Snow gave his father's ward a long, chilling look.

“**I think not**, Greyjoy,” he said. (2005)

(15b) “There's another thing we'll see, while we are about it; and that is, you will pay for smashing my boat.” “Pay for it!” exclaimed he. “I think so.” “**I think not.**” (1869)

(16) He was just such a one as I wished for the darling of my heart, but **you thought not so**. (1827)

(17) “They didn't follow you, did they?” “**I don't think so.**” (2000)

According to the data in Table 6, among the 14 verbs examined in the present study, only *think not* survives as a current expression today, as in (15a, b). Type 5 experienced a boom in the middle of the 19th century but gradually fell out of use after that. Nowadays this expression may carry a slightly archaic tone. In the example in (15b), *I think not* is clearly paralleled as a negative variant of *I think so*. In the COHA, a few examples of *I think not so* occurred, as in (16), but this was not the norm, and the other option of *I do not think so* was more widely used (17).

Table 6. Frequency of Local Negation Type 5

	1810-20s	1860s	1910s	2000s	Total
<i>think</i>	1.9	4.7	2.6	1.7	10.8
<i>fear</i>	0.9	0.4	0.1	0	1.3
<i>say</i>	0	0.2	0.3	0	0.5
Total	2.7	5.2	3.0	1.8	12.7

### 5.7 Summary of Local Negation Types

As is clear from the above discussion, local negation is by no means homogenous. Types 1 and 2 can be substituted with the *do*-form without any change in meaning. In addition, the frequency of these constructions decreased over time, although the pace of their decline was slower than that of clausal negation. In both types 1 and 2, the frequency of *do*-less constructions did not show a change in the first half of the 19th century, but a sharp decline from the second half of the 19th century onward. Considering that the process of decline was



only slow because of the survival of set phrases, types 1 and 2 are similar to clausal negation. Type 5 also shares these qualities, namely occurrence of the *do*-form and decline in frequency, although the syntactic quality of type 5 seems different from that of types 1 and 2.

On the other hand, types 3 and 4 cannot be substituted with the *do*-form and their frequency has not declined over time. Clearly, these two qualities are linked. These two types of local negation have established distinctive meanings, and hence survive until the present time.

I assume that as *do*-less negatives declined, the sequence “verb + *not*” itself was avoided because of the ambiguity in meaning. My speculation is that as the “verb + *not*” construction declined in use, the meaning of the sequence “verb + *not*” has been specified to negate *to*-infinitive, which may explain the recent boom of “verb + *not to*” construction.

Overall, in an analysis of *do*-less negatives, types 1 and 2 of local negation may be considered as a part of clause negation.

## **6. Conclusion**

This paper has demonstrated that the development of *do* was not complete, even in the 19th and 20th centuries. However, it seems safe to say that the regulation process was almost complete, and *do*-less negatives became obsolete by the early 21st century. The change in the frequency of *do*-less negative constructions is clear, in that the regulation process was still in progress even during the 19th and 20th centuries, once the regulation rate exceeded 90%.

The *know*-group verbs, as reported in previous studies, proved

here to be reluctant to accept the *do*-form, even in the final stage of the linguistic change. In fact, the tendency became more obvious over time. The verbs *know*, *doubt*, and *care* are the last resistors against the *do*-form. The occurrence of *do*-less negative constructions was almost confined to these three verbs after the 19th century. It is also worth noting that verbs which are employed in formulaic expressions tend to persist longer.

Local negation has been neglected in previous studies. However, it may be concluded that the qualities of local negation types 1 and 2 are closer to those of clausal negation, which can be replaced by the “*do not V*” construction. These constructions were probably subject to the same decline as were *do*-less negatives, albeit at a slower pace.

Stylistic aspects were excluded from the present study, although they are doubtless important factors. The corpus analysed here includes texts using non-standard dialects and poetic language. This drawback, however, may be offset by the advantage of using the COHA, with its extensive data covering a full two centuries. I leave the qualitative analysis of *do*-less constructions to future studies.

### **Corpus**

Davies, Mark. 2008-. *The Corpus of Historical American English*.

<Available online at <http://corpus.byu.edu/coha/>>

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